Serial No. 10/588,156 Amendment dated September 10, 2008 Reply to OA of April 10, 2008

IN THE CLAIMS:

1. (Currently Amended) A process for initiating a reaction between methanol and a hydrogen peroxide to produce a gas, which comprises contacting methanol and hydrogen peroxide in the liquid phase and at a pressure equal to, below or above atmospheric pressure in the presence of a catalyst comprising at least one group 7, 8, 9, 10 or 11 transition metal.

2. (Cancel)

- 3. (Currently Amended) A process according to claim 21, wherein the peroxide is hydrogen peroxide and the hydrogen peroxide is in the form of an aqueous solution, an alcohol solution or urea pellets comprising at least 6 vol% hydrogen peroxide.
- 4. (Currently Amended) A process according to claim 1, wherein the reaction between methanol and <u>hydrogen</u> peroxide produces at least one <u>product selected from the group consisting</u> of hydrogen, carbon dioxide, carbon monoxide, methane and oxygen.
- 5. (Currently Amended) A process according to claim 1, wherein the methanol and <u>hydrogen</u> peroxide are present in a molar ratio of 2.5:1 to 1:3.

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- 6. (Currently Amended) A process according to claim 5, wherein the peroxide is hydrogen peroxide and the methanol and hydrogen peroxide are present in a molar ratio of about 1:1.
- 7. (Previously Presented) A process according to claim 6, wherein the reaction comprises at least one of:

$$2CH_3OH + H_2O_2$$
 $5H_2 + 2CO_2;$ $2CH_3OH + H_2O_2$ $2H_2O + 2CO + 3H_2;$ $CH_3OH + H_2O_2$ $CO_2 + 2H_2 + H_2O;$ $CH_3OH + 2H_2O_2$ $H_2 + CO_2 + 3H_2O;$ and $CH_3OH + 3H_2O_2$ $CO_2 + 5H_2O$

- 8. (Currently Amended) A process according to claim 1, wherein the metal is selected from <u>at least</u> one or more of element from the group consisting of nickel, cobalt, copper, silver, iridium, gold, palladium, ruthenium, rhodium and platinum.
- 9. (Previously Presented) A process according to claim 1, wherein the metal is in metallic form.
- 10. (Previously Presented) A process according to claim 1, wherein the catalyst contains one or more catalyst promoters.
- 11. (Previously Presented) A process according to claim 1, wherein the initiation is carried out without heating the reactants.

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- 12. (Previously Presented) A process according to claim 1, wherein the initiation is carried out at a temperature of less than 80° C.
- 13. (Previously Presented) A process according to claim 1, wherein the initiation is carried out at a temperature of less than 30° C.
- 14. (Previously Presented) A process according to claim 13, wherein the initiation is carried out at about room temperature.
- 15. (Previously Presented) A process as claimed in claim 1, which further comprises reforming an organic feed to produce a product stream comprising carbon dioxide, hydrogen and optionally carbon monoxide.
- 16. (Original) A process as claimed in claim 15, wherein the organic feed is selected from an alcohol and a hydrocarbon.
- 17. (Previously Presented) A process as claimed in claim 15, wherein any carbon monoxide produced in the reforming step is converted into carbon dioxide by contacting the product stream with a water gas shift catalyst in the presence of water.
- 18. (Previously Presented) A process according to claim 1, which is carried out in a fuel cell, to power a rocket or to inflate an air bag, to pressurize mechanical equipment or for the quick start up of catalytic exhausted gas converter or $N0_x$ purifier.

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- 19. (Original) An apparatus for carrying out a reforming reaction, said apparatus comprising storage means containing methanol and peroxide, a housing containing a catalyst comprising at least one group 7, 8, 9, 10 or 11 transition metal, and means for introducing the methanol and the peroxide into the housing.
- 20. (Original) An apparatus as claimed in claim 19, wherein the housing additionally contains a water gas shift catalyst located downstream of the catalyst comprising at least one group 7, 8, 9, 10 or 11 transition metal.
- 21. (Previously Presented) An apparatus as claimed in claim 19, which comprises a fuel cell downstream of the housing and means for transferring any hydrogen produced in the housing to the fuel cell.